

CLAIMS

What is claimed is:

1. A food preparation appliance, comprising:
 - a. a residential home gateway server (10) operatively connected to a source of food preparation instructions via a first data communications interface, the server (10) comprising
 - i. a memory, for storing predetermined food processing characteristics, and
 - ii. a first communications interface;
 - b. a controller (20) operatively connected to the server (10) by a second data communications interface;
 - c. a hopper (42) for containing food to be prepared;
 - d. a chamber (46) for being heated by a heating element;
 - e. a stopper (44) in communication with the hopper (42) and the chamber (46), the stopper (44) operatively connected to and selectively controllable by the controller (20) to provide a predetermined portion of the food from the hopper (42) into the chamber (46);
 - f. a conduit (30) for a liquid, the conduit (30) in fluid communication with the chamber (46);
 - g. a valve (32) disposed intermediate the conduit (30) and the chamber (46) and operatively connected to and selectively controllable by the controller (20); and
 - h. software, resident in the memory, to transform the food processing characteristics into a set of commands for the controller (20) based on the instructions.

2. The system of claim 1 further comprising a remote device for supplying the instructions to the residential home gateway server (10), the remote device comprising computers (110) connected to the Internet (104), personal digital assistants (120), cellular telephones, and remote control devices having access to the residential home gateway server (10) via local networks.

3. The system of claim 1 wherein the predetermined portion of the food of element (e) comprises single serving portions and multiple serving portions.

4. The system of claim 1 wherein the stopper (44) comprises rotary valves, internally compartmentalized wheels, sliding doors, and corkscrews.

5. The system of claim 1 wherein the stopper (44) is a rotatable wheel further comprising a receiver (45) for containing the predetermined portion of food of element (e).

6. The system of claim 1 wherein the stopper (44) has at least one position that seals the food in the hopper (42) from the chamber (46).

7. The system of claim 1 wherein the food comprises dry rice, dry grain cereals, dry soup, dry pasta, dry legumes, and foods reconstitutable with water.

8. The system of claim 1 wherein the receiver (45) and the conduit (30) are disposed to have at least one position in which food will be washed from receiver (45) into the chamber (46) by fluids from the conduit (30).

9. The system of claim 1 wherein the controller (20) comprises stepping motors, X-10 modules, timers, controllers (20) external to devices (40,41), and controllers (20) embedded in cooking devices (40,41).

10. The system of claim 1 wherein the controller (20) is a plurality of controllers (20).

11. The system of claim 1 wherein the controller (20) is remotely programmable.

12. The system of claim 1 wherein the residential home gateway server (10) is in communication with a server (112) to receive instructions to control controller (20), the instructions comprising food preparation data.

13. A food preparation appliance, comprising:
- a. a residential home gateway server (10) operatively connected to a source of preparation instructions via the communications interface, the server (10) comprising
 - i. a memory, for storing predetermined food processing instructions, and
 - ii. a communications interface;
 - b. a controller (20) operatively connected to the server (10) by the communications interface;
 - c. a hopper (42) for containing food to be prepared;
 - d. a cover sealably engagable onto a pre-existing preparation device having a controllable cooking element and a cooking chamber (46);
 - e. a stopper (44) disposed between the hopper (42) and the cover, the stopper (44) operatively connected to and selectively controllable by the controller (20) to provide a predetermined portion of the food from the hopper (42) into the pre-existing device;
 - f. a conduit (30) for a liquid, the conduit (30) in fluid communication with the cover;
 - g. a valve (32) disposed intermediate the conduit (30) and the cover and operatively connected to and selectively controllable by the controller (20); and
 - h. software, resident in the memory, to transform the food processing characteristics into a set of commands for the controller (20) based on the preparation instructions.

14. A food preparation appliance, comprising:
- a. a chamber (46);
 - b. a controller (20) comprising a telephone system interface for being operative connection to a telephone system;
 - c. a hopper (42) for containing food to be prepared;
 - d. a stopper (44) in communication with the chamber (46) and the hopper (42), the stopper (44) operatively connected to and selectively controllable by the controller (20) to provide a predetermined portion of the food from the hopper (42) into the chamber (46);
 - e. a conduit (30) for a liquid, the conduit (30) in communication with the chamber (46); and
 - f. a valve (32) disposed intermediate the conduit (30) and the chamber (46) and operatively connected to and selectively controllable by the controller (20);
 - g. whereby the controller (20) is responsive to commands entered using dual tone multi-frequency signaling to implement food preparation instructions.

FIG. 10

15. A method of preparing food comprising:

- a. receiving data from a remote source (110,112,120), the data comprising an amount of desired servings of the food and a starting time for preparation of the food;
- b. determining the preparation characteristics of the food, the characteristics comprising an amount of liquid required for preparing the food and the length of preparation time;
- c. providing a portion of the food from a hopper (42) into a chamber (46) in a sufficient quantity to satisfy the desired servings by selectively engaging a stopper (44), disposed intermediate the hopper (42) and the chamber (46), until the sufficient quantity of food has been delivered from the hopper (42) into the chamber (46);
- d. providing liquids to the chamber (46) from a conduit (30) sufficient to satisfy the characteristics for the number of desired serving requirements; and
- e. engaging a heating element accessible to the chamber (46) for a time sufficient to satisfy the characteristics.

16. The method of claim 15 wherein the remote source (110,112,120) comprises remote television remote controllers, cellular phones interfacing via the Internet (104) to the residential home gateway server (10), cellular phones interfacing directly via a telephone interface to the residential home gateway server (10), cellular phones interfacing directly via a telephone interface to the controller (20), personal digital assistants interfacing via the Internet (104) to the residential home gateway server (10), personal digital assistants interfacing directly via a telephone interface to the controller (20), and devices accessing the residential home gateway server (10) via local area network.

17. The method of claim 15 wherein element (a) further comprises receiving data at a commercial food preparation and service location from a remote source (110,112,120), the data comprising an amount of desired servings of the food, a starting time for preparation of the food, and an identifier of the person ordering the food.

18. The method of claim 15 further comprising obtaining at least a portion of the characteristics from the Internet (104).

19. The method of claim 15 further comprising:

- f. obtaining measurements of predetermined food preparation device physical characteristics (40,41);
- g. using the measurements during preparation of the food.

20. The method of claim 21 further comprising using the measurements to provide information to the user, the information comprising status and alarms.

21. A food preparation appliance, comprising:

- a. means for containing food to be prepared;
- b. means for storing food processing characteristics for the food to be prepared;
- c. means for accepting instructions for a desired portion of the food to be prepared;
- d. means for communicating the instructions to a controller (20);

- e. means for selectively allowing a desired amount of the food to enter a means for preparing the desired amount of the food from the means for containing the food to be prepared; and
- f. means for providing a liquid into a chamber (46) according to the food processing characteristics for the food;
- g. whereby the controller (20) controls preparing of the desired portion of the food in the chamber (46) according to the food processing characteristics for the food.

22. A remotely controllable food preparation appliance for a home environment, the appliance comprising:

- a hopper for comprising a food ingredient;
- a heating chamber;
- a stopper between the chamber and the hopper for enabling an amount of the ingredient to enter the chamber;
- a conduit for a liquid;
- a valve between the conduit and the chamber for control of a volume of the liquid to enter the chamber;
- a controller coupled to the stopper and the valve for control of the amount and of the volume;
- an interface at the controller for enabling remote control of the controller.

23. The appliance of claim 22, wherein the interface enables remote control via a data network.

24. The appliance of claim 22, wherein the interface enables remote control via an infrared remote controller.

25. The appliance of claim 22 for cooking rice.